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NEWS 4	Feb 01	DKILIT now produced by FIZ Karlsruhe and has a new update frequency
NEWS 5	Feb 19	Access via Tymnet and SprintNet Eliminated Effective 3/31/02
NEWS 6	Mar 08	Gene Names now available in BIOSIS
NEWS 7	Mar 22	TOXLIT no longer available
NEWS 8	Mar 22	TRCTHERMO no longer available
NEWS 9	Mar 28	US Provisional Priorities searched with P in CA/CAplus and USPATFULL
NEWS 10	Mar 28	LIPINSKI/CALC added for property searching in REGISTRY
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NEWS 13	Apr 09	BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS 14	Apr 09	ZDB will be removed from STN
NEWS 15	Apr 19	US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS 16	Apr 22	Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS 17	Apr 22	BIOSIS Gene Names now available in TOXCENTER
NEWS 18	Apr 22	Federal Research in Progress (FEDRIP) now available

NEWS EXPRESS	February 1 CURRENT WINDOWS VERSION IS V6.0d, CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP), AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
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=> s multipotent (p) stem (p) cell (p) peripheral (p) neural

   3 FILES SEARCHED...
L1          60 MULTIPOTENT (P) STEM (P) CELL (P) PERIPHERAL (P) NEURAL

=> dup rem l1

PROCESSING COMPLETED FOR L1
L2           26 DUP REM L1 (34 DUPLICATES REMOVED)

=> d l2 total ibib kwic


L2   ANSWER 1 OF 26  CAPLUS  COPYRIGHT 2002 ACS
ACCESSION NUMBER:        2002:105754  CAPLUS
TITLE:                   Multipotent neural stem
                       cells from peripheral tissues and
                         uses thereof
INVENTOR(S):             Toma,  Jean; Akhavan,  Mahnaz; Fernandes,  Karl J.
L.;
                         Fortier,  Mathieu; Miller,  Freda
PATENT ASSIGNEE(S):      Can.
SOURCE:                  U.S. Pat. Appl. Publ., Cont.-in-part of Ser. No. US
                         2000-670049, filed on 25 Sep 2000 which is a contin
                         CODEN: USXXCO
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  2
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
     US 2002016002      A1   20020207       US 2001-916639   20010726
     WO 2001053461      A1   20010726       WO 2001-CA47     20010124
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
             HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
             LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
             SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
             YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
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PRIORITY APPLN. INFO.: US 2000-490422 A2 20000124
US 2000-67[redacted]9 A2 20000925
WO 2001-CA4[redacted] A2 20010124

TI **Multipotent neural stem cells** from **peripheral** tissues and uses thereof

AB This invention relates to **multipotent neural stem cells**, purified from the **peripheral** nervous system of mammals, capable of differentiating into **neural** and non-**neural cell** types. These **stem cells** provide an accessible source for autologous transplantation into CNS, PNS, and other damaged tissues.

L2 ANSWER 2 OF 26 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 2002170969 IN-PROCESS
DOCUMENT NUMBER: 21899365 PubMed ID: 11902683
TITLE: Cell-intrinsic and cell-extrinsic cues regulating lineage decisions in multipotent neural crest-derived progenitor cells.
AUTHOR: Paratore Christian; Hagedorn Lilian; Floris Julien; Hari Lisette; Kleber Maurice; Suter Ueli; Sommer Lukas
CORPORATE SOURCE: Institute of Cell Biology, Swiss Federal Institute of Technology, ETH-Honggerberg, Zurich.
SOURCE: INTERNATIONAL JOURNAL OF DEVELOPMENTAL BIOLOGY, (2002 Jan) 46 (1) 193-200.
Journal code: 8917470. ISSN: 0214-6282.
PUB. COUNTRY: Spain
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE: Entered STN: 20020321
Last Updated on STN: 20020321

AB **Multipotent stem cells** must generate various differentiated **cell** types in correct number and sequence during **neural** development. In the **peripheral** nervous system (PNS), this involves the formation of postmigratory progenitor **cell** types which maintain multipotency and are able to give rise to **neural** and non-**neural cells** in response to instructive growth factors. We propose that fate restrictions in such progenitor **cells** are controlled by the combinatorial interaction of different extracellular signals, including community effects in response to both neurogenic and gliogenic factors. In addition, distinct progenitor **cell** types display intrinsic differences which modulate their response to the extracellular environment. Thus, a progenitor **cell** is apparently able to integrate multiple intrinsic and extrinsic cues and thereby to choose fates appropriate for its location. Fate analysis of genetically modified progenitor **cells** will help to identify the molecules involved. This approach appears promising given the identification of **multipotent** progenitor **cells** from the mouse PNS and the availability of genetics in the mouse system.

L2 ANSWER 3 OF 26 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:545835 CAPLUS
DOCUMENT NUMBER: 135:119253
TITLE: **Multipotent neural stem cells** from **peripheral** tissues and uses thereof
INVENTOR(S): Toma, Jean; Akhavan, Mahnaz; Fernandes, Karl J. L.; Fortier, Mathieu; Miller, Freda; Golster, Andrew
PATENT ASSIGNEE(S): McGill University, Can.
SOURCE: PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001053461	A1	20010726	WO 2001-CA47	20010124

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2002016002	A1	20020207	US 2001-916639	20010726
PRIORITY APPLN. INFO.:			US 2000-490422	A 20000124
			US 2000-670049	A 20000925
			WO 2001-CA47	A2 20010124

TI **Multipotent neural stem cells** from **peripheral** tissues and uses thereof

AB This invention relates to **multipotent neural stem cells**, purified from the **peripheral** nervous system of mammals, capable of differentiating into **neural** and non-**neural cell** types. These **stem cells** provide an accessible source for autologous transplantation into CNS, PNS, and other damaged tissues. **Multipotent neural stem cells** were purified from mouse olfactory epithelium. Greater than 95% of the **cells** expressed nestin, a marker for **stem cells** and **neural stem cells**.

ST **multipotent neural stem cell** **peripheral** tissue; transplantation **multipotent neural stem cell** differentiation; nestin **multipotent neural stem cell**

IT Adipose tissue
(adipocyte, differentiation into; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)

IT Proteins, specific or class
RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(**cell** fate-detg.; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)

IT Injury
(**cells** for transplantation and repair of; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)

IT Nervous system
(central; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)

IT Skin
(dermis; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)

IT Heart
Pancreatic islet of Langerhans
(differentiation into **cells** of; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)

IT Astrocyte
Neuroglia
Oligodendrocyte
Schwann **cell**
(differentiation into; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)

IT Nervous system
(dopamine[redacted]c, **multipotent stem cells**
capable of differentiating into neurons of; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)
IT Blood serum
(fetal bovine; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)
IT Gene
RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(heterologous, in **multipotent stem cell**; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)
IT Development, mammalian postnatal
(juvenile; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)
IT Tongue
(**multipotent neural stem cells** from mouse; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)
IT Aging, animal
Animal tissue culture
Cell differentiation
Development, mammalian postnatal
Drug delivery systems
Gene therapy
Mammal (Mammalia)
Skin
Transformation, genetic
Transplant and Transplantation
(**multipotent neural stem cells** from **peripheral** tissues and uses thereof)
IT Sensory receptors
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(**multipotent neural stem cells** purifn. from tissues contg.; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)
IT Brain
(**multipotent neural stem cells** transplantation into; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)
IT Fibronectins
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(**multipotent stem cell** expressing; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)
IT Proteins, specific or class
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(nestins, **multipotent stem cell** expressing; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)
IT Transplant and Transplantation
(**neural**; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)
IT Nerve
(neuron, differentiation into; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)
IT Nose

(olfactory epithelium, **multipotent neural stem cells** from mouse; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)

IT Animal tissue
(**peripheral**; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)

IT Muscle
(smooth, differentiation into **cell** of; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)

IT **Cell**
(**stem**; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)

IT Proteins, specific or class
RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(therapeutic; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)

IT Nerve
(transplant; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)

IT Nose
(vomeronasal organ, **multipotent neural stem cells** from mouse and rat; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)

IT 62031-54-3, FGF 62229-50-9, EGF
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**multipotent neural stem cells** from **peripheral** tissues and uses thereof)

IT 51-61-6, Dopamine, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**multipotent stem cells** differentiating into neurons expressing; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)

IT 152121-47-6, SB203580 154447-36-6, LY294002 167869-21-8, PD098059
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(skin-derived **multipotent neural stem cells** response to; **multipotent neural stem cells** from **peripheral** tissues and uses thereof)

L2 ANSWER 4 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

ACCESSION NUMBER: 2001:574390 BIOSIS
DOCUMENT NUMBER: PREV200100574390
TITLE: Neural precursor cells in the peripheral nervous system.
AUTHOR(S): Gray, R. A. (1); Han, Y.; Bell, T.; Magnuson, D. S. K. (1)
CORPORATE SOURCE: (1) Dept Anatomical Sci and Neurobiol, Univ Louisville, Louisville, KY USA
SOURCE: Society for Neuroscience Abstracts, (2001) Vol. 27, No. 2, pp. 2045. print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience San Diego, California, USA November 10-15, 2001
ISSN: 0190-5295.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

AB **Multipotent neural stem cells** hold promise for [redacted] repair of degenerative and tr[redacted]atic injuries of the central nervous system. Can **stem cells** be isolated from tissue of the **peripheral** nervous system such as the dorsal root ganglia (DRG)? Embryologically, DRG **cells** are of **neural** crest origin while those in the brain and spinal cord are of neuroepithelial origin. We tested the hypothesis that there are **neural stem cells** in the DRGs of the neonatal rat. Rats four to seven days of age were used in the experiments. DRG **cells** were dissected, dissociated and cultured in the presence of the mitogens EGF and FGF2. "Neurospheres" grew in both primary and secondary (passaged) cultures. The cultured **cells** continued to divide in the presence of the mitogens following two passages, and when placed in mitogen free, serum containing media, differentiated into Map2a,b positive, GFAP positive and Rip positive **cells**. The differentiated **cells** had appropriate neuronal, astrocytic and oligodendroglial morphologies. Differentiated cultures also contained substantial numbers of nestin positive **cells**. As suggested by the previous work of Namaka and Hochman, we conclude that there are **neural** precursor **cells** in neonatal rat DRGs that possess the capability to proliferate and differentiate into **cells** of neuronal and glial lineages, at least under in vitro conditions. The physiological properties and potential applications of these **cells** in repairing the injured spinal cord are currently under investigation.

L2 ANSWER 5 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:151856 BIOSIS
DOCUMENT NUMBER: PREV200200151856
TITLE: Prospective identification, enrichment and characterization of retinal neural stem cells by flow cytometry.
AUTHOR(S): Ahmad, Iqbal (1); Jackson, John D.; Bhattacharya, Sumitra (1)
CORPORATE SOURCE: (1) Ophthalmology, University of Nebraska Medical Center, Omaha, NE USA
SOURCE: Blood, (November 16, 2001) Vol. 98, No. 11 Part 2, pp. 122b. http://www.bloodjournal.org/. print.
Meeting Info.: 43rd Annual Meeting of the American Society of Hematology, Part 2 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971.
DOCUMENT TYPE: Conference
LANGUAGE: English

AB **Neural stem cells** (NSC) have the potential to shed light on brain development and to replace and/or rescue damaged neurons or glia. However, like hematopoietic **stem cells** (HSC) that can be prospectively identified and enriched, the majority of NSC have not been isolated directly from fresh tissues.. . . potential barriers towards understanding their biology and therapeutic usage. To overcome these barriers we have begun prospective identification of retinal **stem cells** based on a strategy developed for the isolation of HSC. There are currently two different approaches for prospective identification of HSC. The first approach includes fluorescence activated **cell** sorting (FACS) using monoclonal antibodies to **cell** surface markers. This approach has been successfully used for prospective isolation of NSC from the **peripheral** nervous system using p75 receptor (Morrison et al, 1999, **Cell** 96: 732) and from human fetal brain using CD133 (Uchida et al, 2000, PNAS 97: 14720). Another approach is based. . . on the ability of HSC to selectively exclude Hoechst dye, which leads to their identification as the "side population" (SP) **cells** by FACS. This approach has been used to enrich NSC from neurospheric culture (Hulopus and Quesenberry, 2000, Cytometry 40: 245). We have used the Hoechst dye exclusion approach to prospectively identify NSC from fresh

embryonic retina. These **cells**, identified as SP, constitute less than 0.01% of total **cells** and their staining with the Hoechst dye are verapamil sensitive. These retinal SP **cells** are proliferative and express neuroectodermal marker, nestin, and retinal progenitor markers; Chx10 and Rx. The retinal SP **cells** are **multipotent** and give rise to neurons and glia in differentiation conditions. Similar SP **cells** can be isolated and enriched from neurospheric culture. In such case, the enrichment is more than 100 folds.

These **cells**, when cultured in high density, give rise to secondary clones which are **multipotent** as **cells** in the primary clones. Taken together, our results suggest that Hoechst dye based FACS constitute a practical approach for the. . .

L2 ANSWER 6 OF 26 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 2000306665 MEDLINE
DOCUMENT NUMBER: 20306665 PubMed ID: 10850492
TITLE: Transient Notch activation initiates an irreversible switch from neurogenesis to gliogenesis by neural crest stem cells.
AUTHOR: Morrison S J; Perez S E; Qiao Z; Verdi J M; Hicks C; Weinmaster G; Anderson D J
CORPORATE SOURCE: Department of Internal Medicine, University of Michigan, Ann Arbor 48109, USA.
CONTRACT NUMBER: RO1 NS23476 (NINDS)
SOURCE: CELL, (2000 May 26) 101 (5) 499-510.
Journal code: CQ4; 0413066. ISSN: 0092-8674.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200007
ENTRY DATE: Entered STN: 20000720
Last Updated on STN: 20000720
Entered Medline: 20000713

AB The genesis of vertebrate **peripheral** ganglia poses the problem of how **multipotent neural** crest **stem cells** (NCSCs) can sequentially generate neurons and then glia in a local environment containing strong instructive neurogenic factors, such as BMP2.. . . in NCSCs in a manner that is completely dominant to BMP2.

Contrary to expectation, Notch activation did not maintain these **stem cells** in an uncommitted state or promote their self-renewal. Rather, even a transient activation of Notch was sufficient to cause a. . . accompanied by accelerated glial differentiation. These data suggest that Notch ligands expressed by neuroblasts may act positively to instruct a **cell**-heritable switch to gliogenesis in neighboring **stem cells**.

L2 ANSWER 7 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2000:445901 BIOSIS
DOCUMENT NUMBER: PREV200000445901
TITLE: Up a Notch: Instructing gliogenesis.
AUTHOR(S): Wang, Songli (1); Barres, Ben A.
CORPORATE SOURCE: (1) Department of Neurobiology, Stanford University School of Medicine, Stanford, CA, 94305 USA
SOURCE: Neuron, (August, 2000) Vol. 27, No. 2, pp. 197-200. print.
ISSN: 0896-6273.
DOCUMENT TYPE: General Review
LANGUAGE: English
SUMMARY LANGUAGE: English
IT Major Concepts

Cell Biology; Nervous System (Neural Coordination)
IT Parts, Structures, & Systems of Organisms
Schwann **cells**: nervous system; brain: function, nervous system; glia: nervous system; **neural** crest **stem cells**: nervous system; **neural stem cells**: **multipotent**, nervous system; neuron: nervous system; **peripheral** nervous system: nervous system
IT Chemicals & Biochemicals
Notch: protein, signaling

L2 ANSWER 8 OF 26 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:595378 CAPLUS
DOCUMENT NUMBER: 131:210090
TITLE: Protein and cDNA sequences for a human fibroblast growth factor (FGF 98), and uses thereof in the diagnosis and treatment of degenerative diseases
INVENTOR(S): Cen, Hui; Garcia, Pablo D.; Grieshammer, Uta; Kassam, Altaf; Lee, Pauline P.; Pot, David; Gospodarowicz, Denis; Martin, Kathleen
PATENT ASSIGNEE(S): Chiron Corporation, USA
SOURCE: PCT Int. Appl., 60 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9946381	A2	19990916	WO 1999-US5235	19990309
WO 9946381	A3	19991104		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9930760	A1	19990927	AU 1999-30760	19990309
EP 1062339	A2	20001227	EP 1999-912374	19990309
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.:

US 1998-77411P	P	19980309
US 1998-83553P	P	19980429
US 1999-264851	A	19990308
WO 1999-US5235	W	19990309

AB This invention provides protein and cDNA sequences for a newly identified human protein, designated FGF 98, which is a member of the fibroblast growth factor (FGF) family. In a preferred embodiment, primary central (CNS) and **peripheral** nervous system (PNS) **cells**, when treated with FGF 98 of the invention, proliferate, have at least a limited self regeneration capacity, and can undergo lineage restriction in response to the local environment. Although FGF 98 has been described on the basis of its ability to promote the survival of neuronal **cell** types, this factor will act on other neuronal **cell** types as well. The invention provides methods of using FGF 98 for the isolation, regeneration, proliferation, and differentiation of mammalian **multipotent neural stem cells**, progenitor **cells**, and progeny. In a further embodiment, **cells** produced by treatment with FGF 98 are used to screen drugs which may affect development, differentiation, survival, and/or function of CNS and PNS derived neurons and glia. The invention also includes therapeutic or pharmaceutical compns. comprising FGF 98 in a effect amt. for treating patients with degenerative diseases. In one embodiment, FGF

98 may be therapeutically administered by implanting into patients vectors
or **cells** capable of producing a biol.-active form of FGF 98 or a precursor of FGF 98.

L2 ANSWER 9 OF 26 MEDLINE DUPLICATE 3
ACCESSION NUMBER: 1999365269 MEDLINE
DOCUMENT NUMBER: 99365269 PubMed ID: 10433908
TITLE: P0 and PMP22 mark a multipotent neural crest-derived cell type that displays community effects in response to TGF-beta family factors.
AUTHOR: Hagedorn L; Suter U; Sommer L
CORPORATE SOURCE: Institute of Cell Biology, Swiss Federal Institute of Technology, ETH-Honggerberg, CH-8093 Zurich, Switzerland.
SOURCE: DEVELOPMENT, (1999 Sep) 126 (17) 3781-94.
Journal code: ECW; 8701744. ISSN: 0950-1991.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199910
ENTRY DATE: Entered STN: 20000111
Last Updated on STN: 20000111
Entered Medline: 19991028

AB Protein zero (P0) and **peripheral** myelin protein 22 (PMP22) are most prominently expressed by myelinating Schwann **cells** as components of compact myelin of the **peripheral** nervous system (PNS), and mutants affecting P0 and PMP22 show severe defects in myelination. Recent expression studies suggest a role. . . . not only in myelination but also during embryonic development. Here we show that, in dorsal root ganglia (DRG) and differentiated **neural** crest cultures, P0 is expressed in the glial lineage whereas PMP22 is also detectable in neurons. In addition, however, P0 and PMP22 are both expressed in a **multipotent cell** type isolated from early DRG. Like **neural** crest **stem cells** (NCSCs), this P0/PMP22-positive **cell** gives rise to glia, neurons and smooth-muscle-like **cells** in response to instructive extracellular cues. In cultures of differentiating **neural** crest, a similar **multipotent cell** type can be identified in which expression of P0 and PMP22 precedes the appearance of **neural** differentiation markers. Intriguingly, this P0/PMP22-positive progenitor exhibits fate restrictions dependent on the cellular context in which it is exposed to environmental signals. While single P0/PMP22-positive progenitor **cells** can generate smooth muscle in response to factors of the TGF-(beta) family, communities of P0/PMP22-positive **cells** interpret TGF-(beta) factors differently and produce neurons or undergo increased **cell** death instead of generating smooth-muscle-like **cells**. Our data are consistent with a model in which cellular association of postmigratory **multipotent** progenitors might be involved in the suppression of a non-**neural** fate in forming **peripheral** ganglia.

L2 ANSWER 10 OF 26 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 1999189758 MEDLINE
DOCUMENT NUMBER: 99189758 PubMed ID: 10089888
TITLE: Prospective identification, isolation by flow cytometry, and in vivo self-renewal of multipotent mammalian neural crest stem cells.
AUTHOR: Morrison S J; White P M; Zock C; Anderson D J
CORPORATE SOURCE: Division of Biology 216-76, California Institute of Technology, Pasadena 91125, USA.
SOURCE: CELL, (1999 Mar 5) 96 (5) 737-49.
Journal code: CQ4; 0413066. ISSN: 0092-8674.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English

FILE SEGMENT: Priority Journals
ENTRY MONTH: 199904
ENTRY DATE: Entered STN: 19990504
Last Updated on STN: 20000303
Entered Medline: 19990422

AB **Multipotent** and self-renewing **neural stem cells** have been isolated in culture, but equivalent **cells** have not yet been prospectively identified in **neural** tissue. Using **cell** surface markers and flow cytometry, we have isolated **neural** crest **stem cells** (NCSCs) from mammalian fetal **peripheral** nerve. These **cells** are phenotypically and functionally indistinguishable from NCSCs previously isolated by culturing embryonic **neural** tube explants. Moreover, in vivo BrdU labeling indicates that these **stem cells** self-renew in vivo. NCSCs freshly isolated from nerve tissue can be directly transplanted in vivo, where they generate both neurons and glia. These data indicate that **neural stem cells** persist in **peripheral** nerve into late gestation by undergoing self-renewal. Such persistence may explain the origins of some PNS tumors in humans.

L2 ANSWER 11 OF 26 MEDLINE DUPLICATE 5
ACCESSION NUMBER: 1999397953 MEDLINE
DOCUMENT NUMBER: 99397953 PubMed ID: 10467245
TITLE: Multipotent and restricted precursors in the central nervous system.
COMMENT: Comment in: Anat Rec. 2000 Aug 15;261(4):139-40
AUTHOR: Rao M S
CORPORATE SOURCE: Department of Neurobiology and Anatomy, University of Utah Medical School, Salt Lake City 84132, USA..
Mahendra.Rao@hsc.utah.edu
SOURCE: ANATOMICAL RECORD, (1999 Aug 15) 257 (4) 137-48. Ref: 52
Journal code: 0370540. ISSN: 0003-276X.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, ACADEMIC)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199910
ENTRY DATE: Entered STN: 19991026
Last Updated on STN: 20020317
Entered Medline: 19991012

AB Acquisition of **cell** type-specific properties in the nervous system is likely a process of sequential restriction in developmental potential. At least two classes of pluripotent **stem cells**, neuroepithelial (NEP) **stem cells** and EGF-dependent neurosphere **stem cells**, have been identified in distinct spatial and temporal domains. Pluripotent **stem cells** likely generate central nervous system (CNS) and **peripheral** nervous system (PNS) derivatives via the generation of intermediate lineage-restricted precursors that differ from each other and from **multipotent stem cells**. Neuronal precursors termed neuronal-restricted precursors (NRPs), multiple classes of glial precursors termed glial-restricted precursors (GRPs), oligodendrocyte-type 2 astrocytes (O2As), astrocyte precursor **cells** (APCs), and PNS precursors termed **neural** crest **stem cells** (NCSCs) have been identified. **Multipotent stem cells** and restricted precursor **cells** can be isolated from embryonic **stem** (ES) **cell** cultures providing a non-fetal source of such **cells**. Analysis in multiple species illustrates similarities between rat, mouse, and human **cell** differentiation raising the possibility that similar factors and markers may be used to isolate precursor **cells** from human tissue or ES **cells**. Anat

Rec (New Anat): 257:137-143, 1999.
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L2 ANSWER 12 OF 26 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:745176 CAPLUS
DOCUMENT NUMBER: 129:341457
TITLE: Generation, characterization, and isolation of neuroepithelial stem cells and lineage-restricted intermediate precursor
INVENTOR(S): Rao, Mahendra S.; Mayer-Proschel, Margot; Mujtaba, Tahmina
PATENT ASSIGNEE(S): University of Utah Research Foundation, USA
SOURCE: PCT Int. Appl., 78 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9850526	A1	19981112	WO 1998-US9630	19980507
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 6361996	B1	20020326	US 1997-852744	19970507
US 2002045251	A1	20020418	US 1998-73881	19980506
AU 9874811	A1	19981127	AU 1998-74811	19980507
EP 983344	A1	20000308	EP 1998-922212	19980507
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.:
US 1997-852744 A 19970507
US 1998-73881 A 19980506
WO 1998-US9630 W 19980507

AB **Multipotent** neuroepithelial **stem cells** and lineage-restricted oligodendrocyte-astrocyte precursor **cells** are described. The neuroepithelial **stem cells** are capable of self-renewal and of differentiation into neurons, astrocytes, and oligodendrocytes. The oligodendrocyte-astrocyte precursor **cells** are derived from neuroepithelial **stem cells**, are capable of self-renewal, and can differentiate into oligodendrocytes and astrocytes, but not neurons. Methods of generating, isolating, and culturing such neuroepithelial **stem cells** and oligodendrocyte-astrocyte precursor **cells** are also disclosed. A method of generating **neural** crest **stem cells** involves inducing neuroepithelial **stem cells** to differentiate in vitro into **neural** crest **stem cells**. Differentiation can be induced by replating the **cells** on laminin, withdrawing mitogens, or adding dorsalizing agents to the growth medium. Derivs. of the **peripheral** nervous system can be generated by inducing the **neural** crest **stem cells** to differentiate in vitro.

L2 ANSWER 13 OF 26 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 1998362104 EMBASE
TITLE: Cytokines in brain development and function.
AUTHOR: Mehler M.F.; Kessler J.A.
CORPORATE SOURCE: M.F. Mehler, Department of Neurology, Rose F. Kennedy Center, Res. Mental Retardation/Human Devmt., Bronx, NY 10451, United States
SOURCE: Advances in Protein Chemistry, (1998) 52/- (223-251).

Refs: 138
ISSN: 0065-3233 CODEN: APCHA2
COUNTRY: United States
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 008 Neurology and Neurosurgery
021 Developmental Biology and Teratology
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Although studies of hemopoietins in **neural** development are still in their infancy, there is already significant evidence that these cytokines exhibit cellular and developmental response profiles. . . of hematopoietic and immune system development will have significant parallels to those active during neurogenesis. During early phases of CNS **stem** and **multipotent** progenitor **cell** development, there is already preliminary evidence that early- and intermediate-acting hemopoietins may exert complementary and cooperative actions on progenitor **cell** proliferation and survival in association with early-acting CNS cytokines (e.g., EGF, bFGF) (11, 12). Individual hemopoietins may also exert several. . . the hematopoietic literature has also shown that synergistic interactions between hemopoietin subgroups may be factor specific for a defined progenitor **cells** stage within a single lineage, and preliminary observations using cultured **neural** embryonic progenitor species have revealed similar patterns of developmental signaling (3, 25, 131, 132). Finally, experimental studies during early stages of hematopoiesis have shown that **cell** cycle regulation mediated by hemopoietin cooperativity may involve the interplay of **cell** cycle regulatory molecules and the levels of retinoblastoma protein phosphorylation (133). Previous studies using homozygous null mutations of the retinoblastoma. . . the particular importance of this protein for intermediate stages of CNS neurogenesis, and thus suggest that detailed analysis of selected **cell** cycle regulatory proteins will be crucial for defining the role of **cell** cycle transitions in **neural** lineage commitment and in early stages of cellular differentiation and viability (134-136). Although many apparent similarities exist between hematolymphopoiesis and. . . hallmark of neurogenesis is the development of electrical excitability and the establishment of synaptic and other functional connections between evolving **neural** lineage species. Preliminary evidence shows that the sequential expression of specific ligand-gated and ionic channels may be essential for the. . . and activity-dependent cellular morphogenesis may also each be orchestrated by distinct subsets of hemopoietins (3, 138). The analysis of these '**neural**-specific' cellular functions may also reveal new and interesting areas of commonality between neurogenesis and hematolymphopoiesis. In summary, these cumulative experimental observations have already demonstrated that four helix-loop bundle cytokines have a diverse spectrum of cellular actions during **neural** development that rival and often exceed those of the traditional neurotrophins and even the rapidly expanding TGF.beta. superfamily. These cytokines are involved in multiple stages of brain and **peripheral** nervous system lineage restriction, commitment, progenitor **cell** proliferation, survival, and graded stages of cellular differentiation.

L2 ANSWER 14 OF 26 MEDLINE DUPLICATE 6
ACCESSION NUMBER: 1998376148 MEDLINE
DOCUMENT NUMBER: 98376148 PubMed ID: 9712303
TITLE: Induction and patterning of the neural crest, a stem cell-like precursor population.
AUTHOR: LaBonne C; Bronner-Fraser M
CORPORATE SOURCE: Division of Biology, Beckman Institute 139-74, California Institute of Technology, Pasadena 91125, USA.. Clabonne@caltech.edu
SOURCE: JOURNAL OF NEUROBIOLOGY, (1998 Aug) 36 (2) 175-89. Ref:

Journal code: JAM; 0213640. ISSN: 0022-3034.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199811
ENTRY DATE: Entered STN: 19990106
Last Updated on STN: 19990106
Entered Medline: 19981106

AB The **neural** crest is a **multipotent** precursor population which ultimately generates much of the **peripheral** nervous system, epidermal pigment **cells**, and a variety of mesectodermal derivatives. Individual **multipotent neural** crest **cells** are capable of some self-renewing divisions, and based upon this criteria can be considered **stem cells**. Considerable progress has been made in recent years toward understanding how this important population of progenitor **cells** is initially established in the early embryo, and how **cell**-intrinsic and non-**cell**-intrinsic factors mediate their subsequent lineage segregation and differentiation.

L2 ANSWER 15 OF 26 MEDLINE DUPLICATE 7
ACCESSION NUMBER: 1998365440 MEDLINE
DOCUMENT NUMBER: 98365440 PubMed ID: 9698451
TITLE: A common neural progenitor for the CNS and PNS.
AUTHOR: Mujtaba T; Mayer-Proschel M; Rao M S
CORPORATE SOURCE: Department of Neurobiology and Anatomy, Department of Oncological Sciences, University of Utah Medical School, 50
North Medical Drive, Salt Lake City, Utah, 84132, USA.
CONTRACT NUMBER: NO1-HD-7-3263 (NICHD)
SOURCE: DEVELOPMENTAL BIOLOGY, (1998 Aug 1) 200 (1) 1-15.
Journal code: E7T; 0372762. ISSN: 0012-1606.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199808
ENTRY DATE: Entered STN: 19980910
Last Updated on STN: 19980910
Entered Medline: 19980831

AB Cultured spinal cord neuroepithelial (NEP) **cells** can differentiate into neurons, oligodendrocytes and astrocytes and are morphologically and antigenically distinct from **neural** crest **stem cells** (NCSCs) that generate the PNS. NEP **cells**, however, can generate p75/nestin-immunoreactive **cells** that are morphologically and antigenically similar to previously characterized NCSCs. NEP-derived p75-immunoreactive **cells** differentiate into **peripheral** neurons, smooth muscle, and Schwann **cells** in mass and clonal culture. Clonal analysis of NEP **cells** demonstrates that a common NEP progenitor **cell** generated both CNS and PNS phenotypes. Differentiation into NCSCs was promoted by BMP-2/4 and differentiation did not require **cells** to divide, indicating that BMP played an instructive role in the differentiation process. Thus, individual NEP **cells** are **multipotent** and can differentiate into most major types of **cell** in the CNS and PNS and that PNS differentiation involves a transition from a NEP **stem** to another more limited, p75-immunoreactive, **neural** crest **stem cell**.
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L2 ANSWER 16 OF 26 MEDLINE DUPLICATE 8
ACCESSION NUMBER: 97326937 MEDLINE

DOCUMENT NUMBER: 97326937 PubMed ID: 9183749
TITLE: Immortalization and controlled in vitro differentiation of murine multipotent neural crest stem cells.
AUTHOR: Rao M S; Anderson D J
CORPORATE SOURCE: Division of Biology 216-76, Howard Hughes Medical Institute, California Institute of Technology, Pasadena 91125, USA.
CONTRACT NUMBER: NS-23476 (NINDS)
SOURCE: JOURNAL OF NEUROBIOLOGY, (1997 Jun 20) 32 (7) 722-46.
Journal code: JAM; 0213640. ISSN: 0022-3034.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199707
ENTRY DATE: Entered STN: 19970805
Last Updated on STN: 19970805
Entered Medline: 19970721

AB To isolate mouse **neural** crest **stem cells**, we have generated a rat monoclonal antibody to murine neurotrophin receptor (p75). We have immortalized p75+ murine **neural** crest **cells** by expression of v-myc, and have isolated several clonal **cell** lines. These lines can be maintained in an undifferentiated state, or induced to differentiate by changing the culture conditions. One of these **cell** lines, MONC-1, is capable of generating **peripheral** neurons, glia, and melanocytic **cells**. Importantly, most individual MONC-1 **cells** are **multipotent** when analyzed at clonal density. The neurons that differentiate under standard conditions have an autonomic-like phenotype, but under different conditions can express markers of other **peripheral** neuronal lineages. These lines therefore exhibit a similar differentiation potential as their normal counterparts. Furthermore, they can be genetically modified or generated from mice of different genetic backgrounds, providing a useful tool for molecular studies of **neural** crest development.

L2 ANSWER 17 OF 26 MEDLINE DUPLICATE 9
ACCESSION NUMBER: 96164424 MEDLINE
DOCUMENT NUMBER: 96164424 PubMed ID: 8590865
TITLE: Origin of the avian neural crest.
AUTHOR: Bronner-Fraser M
CORPORATE SOURCE: Developmental Biology Center, University of California at Irvine 92717, USA.
CONTRACT NUMBER: DE10066 (NIDCR)
HD-15527 (NICHD)
HD-25138 (NICHD)
SOURCE: STEM CELLS, (1995 Nov) 13 (6) 640-6. Ref: 22
Journal code: BN2; 9304532. ISSN: 1066-5099.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199604
ENTRY DATE: Entered STN: 19960418
Last Updated on STN: 20000303
Entered Medline: 19960403

AB **Neural** crest **cells** are derived from a population of **multipotent stem cells** within the **neural** tube. They emerge shortly after **neural** tube closure, migrate extensively in the embryo and localize in numerous sites, where they differentiate into neurons and glia of the **peripheral** nervous system, cartilage and bone of the face, melanocytes and various

other **cell** types. This review summarizes recent experiments from our laboratory delineating the origin and lineage of avian **neural** crest **cells**. **Neural** crest **cells** arise from the ectoderm, which also gives rise to presumptive epidermal, placodal and **neural** tube **cells**. Fate mapping experiments have demonstrated that the **neural** crest arises at the juncture between presumptive epidermis and the **neural** plate. Inductive interactions between these two early tissues can generate **neural** crest **cells**, suggesting that signals travel through the epidermis to generate **neural** crest **cells** prior to **neural** tube closure. Injection of lineage tracer into individual **cells** reveals that a single **neural** fold can form all ectodermal derivatives (i.e., epidermis, **neural** tube, **neural** crest). Even after **neural** tube closure, neuroepithelial **cells** have the capacity to form multiple **neural** crest and **neural** tube derivatives, including both dorsal and ventral phenotypes, suggesting that **neural** tube and **neural** crest **cells** share a common precursor. Further evidence that **neural** crest and **neural** tube **cells** are intimately related comes from experiments in which the cranial **neural** folds are ablated. The remaining **neural** tube **cells** have the capacity to regulate, at least for a limited time, to compensate for missing **neural** crest **cells**. These experiments suggest that the early neuroepithelium has no clear segregation with respect to the **neural** tube or **neural** crest. With time, dorsalizing and ventralizing signals may cause **neural** tube **cells** to acquire specific **cell** fates.

L2 ANSWER 18 OF 26 MEDLINE DUPLICATE 10
ACCESSION NUMBER: 95315080 MEDLINE
DOCUMENT NUMBER: 95315080 PubMed ID: 7794812
TITLE: Human neuroblastoma I-type cells are malignant neural crest stem cells.
AUTHOR: Ross R A; Spengler B A; Domenech C; Porubcin M; Rettig W J; Biedler J L
CORPORATE SOURCE: Department of Biological Sciences, Fordham University, Bronx, New York 10458, USA.
CONTRACT NUMBER: CA08748 (NCI)
CA41520 (NCI)
SOURCE: CELL GROWTH AND DIFFERENTIATION, (1995 Apr) 6 (4) 449-56.
Journal code: AYH; 9100024. ISSN: 1044-9523.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199508
ENTRY DATE: Entered STN: 19950817
Last Updated on STN: 19950817
Entered Medline: 19950803

AB Human neuroblastoma I-type **cells** isolated from **cell** lines in vitro are morphologically intermediate between neuroblastic (N) **cells**, with properties of embryonic sympathoblasts, and substrate-adherent (S) **cells** having properties of embryonic Schwann/glial/melanocytic **cells** of the **neural** crest. I **cells** have biochemical features of both N and S **cells**. We propose that the I-type **cell** represents a malignant **neural** crest **stem cell**. The strongest evidence in support of this hypothesis is that: (a) I **cells** can generate progeny that have neuronal properties, i.e., are committed neuroblasts, or properties of nonneuronal, embryonic **neural** crest-derived

cells; and (b) I-type **cells** can generate **multipotent** [redacted]ype progeny, indicating their [redacted]acity for self-renewal, a feature of **stem cells**. We report here that I-type **cells**, derived from four different human neuroblastoma **cell** lines and experimentally induced to differentiate, give rise to **cells** with distinct N or S **cell** phenotypes, indicative of I **cell** multipotentiality. Experiments with a large panel of I-type subclones, isolated from clonal I-type BE(2)-C **cells** and exposed to retinoic acid to induce neuronal differentiation or 5-bromo-2'-deoxyuridine to obtain S-type **cells**, demonstrated that differentiation occurs via induction and selection and not by selection of spontaneously arising variants. The differentiation phenotype was stable. We conclude that human neuroblastoma I-type **cells** are **multipotent** embryonic precursor **cells** of the **peripheral** nervous system, capable of either neuronal or nonneuronal **neural** crest **cell** differentiation.

L2 ANSWER 19 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1996:38486 BIOSIS
DOCUMENT NUMBER: PREV199698610621
TITLE: The glial lineage of the peripheral nervous system.
AUTHOR(S): Cameron-Curry, Patrizia
CORPORATE SOURCE: Inst. d'Embryologie Cellulaire et Moleculaire, CNRS et Coll. de France UMRC 9924, 49 bis avenue de la Belle-Gabrielle, 94736 Nogent-sur-Marne Cedex France
SOURCE: Comptes Rendus des Seances de la Societe de Biologie et de ses Filiales, (1995) Vol. 189, No. 2, pp. 253-261. ISSN: 0037-9026.
DOCUMENT TYPE: Article
LANGUAGE: French
SUMMARY LANGUAGE: French; English
AB Glial **cells** are classified into 4 types. Two kinds of Schwann **cells**, myelinating and non-myelinating, are associated with the nerve fibres; satellite **cells** surround the neuronal soma in the ganglia. and enteric glial **cells** can be in contact with different neurons, that are incompletely ensheathed. A basal lamina is formed at the outer **cell** membrane of Schwann and satellite **cells**, but not inside the enteric plexuses. All the **peripheral** glial **cells** derive from the **neural** crest. The crest population of each axial level has both neuronal and glial potential, but it was unclear if common. . . neurons are of placodal origin. To follow gliogenesis in the avian system we defined new molecular markers specific for glial **cells** by using the monoclonal antibody strategy. One of these markers is the Schwann **cell** Myelin Protein (SMP). It is a surface glycoprotein, belonging to the immunoglobulin superfamily. The SMP protein in vivo is restricted to oligodendrocytes and myelinating and non-myelinating Schwann **cells**, while satellite **cells** and enteric glia are SMP-negative. It is first expressed in the sciatic nerve of the quail embryo around E6, preceding myelination by 5 days. Thus in the PNS the appearance of SMP indicates an early stage of Schwann **cell** differentiation. The anti-SMP Mab was used to study the segregation of the glial lineage in the clonal culture system developed in our laboratory. We demonstrated that differently committed glial ancestors coexist in the cephalic **neural** crest during the migration stage. SMP-positive **cells** were found in 87% of the clones, showing that the gliogenic potential is high. The less abundant precursor is a highly **multipotent** one, the putative **neural** crest **stem** **cell**. The most abundant is the neurogenic precursor that can give rise to both neurons and glial **cells**: the segregation of the neurogenic lineage takes place mostly during the migration phase of the **neural** crest population. At the same time the first fully

committed glial precursors arise. The developing capacities of **neural** crest **cells** were also investigated at different time points of gangliogenesis at the trunk level. Among **neural** crest **cells** migrating in the sclerotomal part of the somites at E3, 69% generated clones containing SMP-positive **cells**. 33% of these clones were homogeneously SMP-positive. The neurogenic precursors, giving rise exclusively to neurons and glia, represented only 5.5%, demonstrating that the segregation of the two lineages is advanced at E3. When DRG **cells** from E6 and older embryos were cloned, no neurons were ever generated. SMP-positive **cells** were found in 37% of the DRG derived clones, and 46% of these were composed exclusively of glial **cells**. Thus determination of the glial lineage is more advanced at these stages. When satellite **cells** from E8 DRGs were cloned, 100% of the clones were composed almost exclusively of SMP-positive glial **cells**. The developmental potential of the **cells** that had migrated to the gut to form the enteric plexuses was also examined. Clones containing both neurons and glial **cells** were found up to E6 derived cultures, but the neuronogenic potential was lost by **cells** from older embryos, revealing divergence of the two lineages. In conclusion, determination of the glial lineage, and in particular segregation. . .

L2 ANSWER 20 OF 26 MEDLINE DUPLICATE 11
ACCESSION NUMBER: 94327030 MEDLINE
DOCUMENT NUMBER: 94327030 PubMed ID: 8050669
TITLE: Stem cells and transcription factors in the development of the mammalian neural crest.
AUTHOR: Anderson D J
CORPORATE SOURCE: Division of Biology, Howard Hughes Medical Institute, California Institute of Technology, Pasadena 91125.
CONTRACT NUMBER: NS23476 (NINDS)
SOURCE: FASEB JOURNAL, (1994 Jul) 8 (10) 707-13. Ref: 64
Journal code: FAS; 8804484. ISSN: 0892-6638.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199409
ENTRY DATE: Entered STN: 19940914
Last Updated on STN: 19940914
Entered Medline: 19940906

AB The **neural** crest is a migratory population of **multipotent** embryonic **cells** that generates the neurons and glia of the **peripheral** nervous system, as well as a variety of non-**neural** mesectodermal and endocrine **cell** types. The study of **neural** crest **cell** and molecular biology provides a system to investigate how such **multipotent** **cells** choose their fates, and whether the repertoire of fates becomes progressively restricted with time. The study of mammalian **neural** crest development has lagged behind studies of avian crest development due to the relative inaccessibility of mammalian embryos. The development of reverse genetic methods in mice, however, has made the analysis of mammalian **neural** crest development both more attractive and more tractable. Rodent **neural** crest **cells** have been isolated and grown in clonogenic cultures, where they behave as **multipotent** **stem** **cells**. This system provides an assay for factors that influence the differentiation of these **multipotent** **cells**. Transcription factors provide valuable early markers for **neural** crest **cells** as well as molecular handles on the lineage segregation process. One such factor is Mash1, a homolog of the Drosophila proneural genes, achaete-scute. Mash1 marks autonomic progenitor **cells** and is essential for their development in vivo, as shown by gene knockout experiments.

L2 ANSWER 21 OF MEDLINE DUPLICATE 12
ACCESSION NUMBER: 94236680 MEDLINE
DOCUMENT NUMBER: 94236680 PubMed ID: 7910115
TITLE: Glial growth factor restricts mammalian neural crest stem cells to a glial fate.
AUTHOR: Shah N M; Marchionni M A; Isaacs I; Stroobant P; Anderson D
J
CORPORATE SOURCE: Division of Biology, California Institute of Technology, Pasadena 91125.
SOURCE: CELL, (1994 May 6) 77 (3) 349-60.
Journal code: CQ4; 0413066. ISSN: 0092-8674.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199406
ENTRY DATE: Entered STN: 19940621
Last Updated on STN: 20000303
Entered Medline: 19940614

AB Growth factors and cytokines are thought to influence the development of uncommitted progenitor **cell** populations, but the issue of how these factors act on individual **cells** remains controversial. Such factors may act simply as selective mitogens or survival factors for **cells** that undergo lineage restrictions stochastically. Alternatively, they may instruct or bias **multipotent** **cells** to choose one lineage at the expense of others. Here we show that glial growth factor (GGF), previously defined as a Schwann **cell** mitogen, strongly suppresses neuronal differentiation of rat **neural** crest **stem** **cells** while promoting or allowing glial differentiation. Quantitative clonal analysis suggests that the action of GGF is likely to be instructive. . . selective. Taken together with the expression pattern of GGF, these data suggest a lateral signaling model for the diversification of **cell** types within developing **peripheral** ganglia.

L2 ANSWER 22 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1994:14630 BIOSIS
DOCUMENT NUMBER: PREV199497027630
TITLE: The ontogeny of the neural crest.
AUTHOR(S): Dupin, Elisabeth (1); Deville, Francoise Sextier-Sainte-Claire; Nataf, Valerie; Le Douarin, Nicole M.
CORPORATE SOURCE: (1) Institut d'Embryologie Cellulaire Moleculaire du CNRS, College de France, 49 bis, avenue de la Belle-Gabrielle, 94736 Nogent-sur-Marne Cedex France
SOURCE. Comptes Rendus de l'Academie des Sciences Serie III Sciences de la Vie, (1993) Vol. 316, No. 9, pp. 1062-1081.
ISSN: 0764-4469.
DOCUMENT TYPE: Article
LANGUAGE: French; English
SUMMARY LANGUAGE: French; English

AB The **neural** crest is part of a larger embryonic structure, the **neural** folds, belonging to the **neural** primordium of the Vertebrate embryo. The **neural** fold is formed by the anterior and lateral ridges of the **neural** anlage, which fuse mediodorsally when the **neural** tube closes. Anteriorly, the epithelium of the **neural** fold does not convert into mesenchymal **cells** and yields Rathke's pouch, the olfactory organ and the epithelium of the mouth roof, of the upper lip and of. . . the frontal region of the head. From the level of the diencephalon (at the level of the epiphysis) downwards

t.e **neural** fold epithelium undergoes the epitheliomesenchymal t ansition a[redacted] yields the **neural** crest **cells** [redacted]ch become later on highly diversified and form various structures and tissues throughout the body. A large amount of data have shown that the environmental cues exerted on crest **cells** both during their migration and when they have reached their target sites are critical in determining their fate. In order to understand the mechanisms through which environmental factors influence crest **cell** d:fferentiation, the developmental capacities of single **neural** crest **cells** were investigated at different time points of their o.itogeny. Single **cell** cultures of crest **cells** have revealed that already at the migratory stage the **neural** crest is made up of **cells** at different states of determination. In particular, the analysis of clones obtained from single **cell** cultures of cephalic migratory crest **cells** has shown that, although many clonogenic **cells** are **multipotent** to varying degrees, others are committed to give rise to one single derivative. Totipotent progenitors able to generate representatives of virtually all the phenotypes (neuronal, glial, melanocytic and mesectodermal) encountered in cephalic **neural** crest derivatives w:re also found. We proposed that they represent **stem** **cells** analogous to those which in the hemopoietic system generate t.e various types of blood **cells**. The **neural** crest **stem** **cell** gives rise to diverse progenitors that become progressively restricted in their potentialities according to an essentially stochastic mechanism while dividing during and after completion of the migration process. Similar cloning experiments of crest **cells** that have already reached their target organs, i. e. sensory ganglia or enteric plexuses, showed that the phenotypic repertoire expressed by crest-derived **cells** decreases with increasing embryonic age. Efforts are made to elucidate the nature of the factors which influence either the survival and/or the differentiation of **neural** crest **cells** in the various types of environments in which they evolve. For example, several proteic growth factors like BDNF, NT3, bFGF were shown to influence the early **neural** crest derivatives of the **peripheral** nervous system (PNS) while they are in the process of gangliogenesis.

L2 A'NSWER 23 OF 26 MEDLINE
ACCESSION NUMBER: 94060697 MEDLINE
DOCUMENT NUMBER: 94060697 PubMed ID: 7902150
TITLE: Segregation of cell lineage in the neural crest.
AUTHOR: Bronner-Fraser M
CORPOR.TE SOURCE: Developmental Biology Center, University of California, Irvine 92717.
SOURCE: CURRENT OPINION IN GENETICS AND DEVELOPMENT, (1993 Aug) 3 (4) 641-7. Ref: 46
Journal code: BJC; 9111375. ISSN: 0959-437X.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE S:GMENT: Priority Journals
ENTRY MONTH: 199312
ENTRY .ATE: Entered STN: 19940201
Last Updated on STN: 19950206
Entered Medline: 19931230

AB Following neurulation, **neural** crest **cells** emerge from the **neural** tube and undergo extensive migrations. At the onset of migration, **multipotent** **stem** **cells** exist within the **neural** crest population. Eventually, these assume one of a number of possible fates, ranging from neurons and glia of the **peripheral** nervous system to pigment **cells** and c.lls of the facial skeleton. **Neural** crest **cells**

follow migratory pathways and differentiate into derivatives that often are characteristic of their axial level of origin. Based on their stereotyped patterns of migration, limited intermixing and distinct homeobox-gene codes, some populations of **neural** crest **cells** may have a rostrocaudal regional identity imprinted prior to their emigration.

L2 ANSWER 24 OF 26 MEDLINE DUPLICATE 13
ACCESSION NUMBER: 94057845 MEDLINE
DOCUMENT NUMBER: 94057845 PubMed ID: 8239297
TITLE: Neural stem cells for CNS transplantation.
AUTHOR: Baetge E E
CORPORATE SOURCE: CytoTherapeutics, Inc., Providence, Rhode Island 02906.
SOURCE: ANNALS OF THE NEW YORK ACADEMY OF SCIENCES, (1993 Sep 24) 695 285-91. Ref: 27
Journal code: 5NM; 7506858. ISSN: 0077-8923.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199312
ENTRY DATE: Entered STN: 19940117
Last Updated on STN: 20000303
Entered Medline: 19931210

AB . . . with transplants in Parkinson's disease, but the process is heavily dependent on an unstable and problematic source of fetal tissue. **Neural stem cells** may become the tissue/**cell** source necessary for developing the therapeutic potential of **neural** transplantation. **Stem cells** are self-renewing, **multipotent** and could provide a well-characterized and clean source of transplantable material. A number of new in vitro approaches have led to the development of continuously propagated **stem cells** that are potential candidates for nervous system transplantation. These include oncogene-induced immortalization and growth-factor stimulation of naturally occurring central and **peripheral** nervous system **stem cells**. The nature of these **cells** and their suitability for transplantation into the CNS will be evaluated.

L2 ANSWER 25 OF 26 MEDLINE DUPLICATE 14
ACCESSION NUMBER: 93374161 MEDLINE
DOCUMENT NUMBER: 93374161 PubMed ID: 8365553
TITLE: Origins of neural crest cell diversity.
AUTHOR: Selleck M A; Scherson T Y; Bronner-Fraser M
CORPORATE SOURCE: Developmental Biology Center, University of California at Irvine 92717.
CONTRACT NUMBER: HD-25138 (NICHD)
SOURCE: DEVELOPMENTAL BIOLOGY, (1993 Sep) 159 (1) 1-11. Ref: 60
Journal code: E7T; 0372762. ISSN: 0012-1606.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199310
ENTRY DATE: Entered STN: 19931022
Last Updated on STN: 19931022
Entered Medline: 19931006

AB The **neural** crest is a population of migratory **cells**, arising from the ectoderm, that invades many sites within the embryo and differentiate into a variety of diverse **cell** types. Pigment **cells**, most **cells** of the **peripheral** nervous system, adrenal medullary **cells**, and some cranial cartilage are

derived from the **neural** crest. Despite a wealth of knowledge concerning their pathways of migration and variety of derivatives, little is known about the formation of **neural** crest cells or their acquisition of positional identity. This review focuses on the origin of **neural** crest **cells** from the ectoderm and the generation of differences in **neural** crest **cell** fates along the rostrocaudal axis. In addition, we consider the role of temporal restriction in the developmental potential of premigratory **neural** crest **cells**. While evidence for the existence of **multipotent stem cells** is strong, some experiments also suggest that there may be heterogeneity among **neural** crest **cell** precursors, perhaps due to differences in origin, that might explain commitment events occurring early in **neural** crest development.

L2 ANSWER 26 OF 26 MEDLINE DUPLICATE 15
ACCESSION NUMBER: 92120107 MEDLINE
DOCUMENT NUMBER: 92120107 PubMed ID: 1769335
TITLE: Common precursors for neural and mesectodermal derivatives in the cephalic neural crest.
AUTHOR: Baroffio A; Dupin E; Le Douarin N M
CORPORATE SOURCE: Institut d'Embryologie cellulaire et moleculaire, CNRS, Nogent-sur-Marne, France.
SOURCE: DEVELOPMENT, (1991 May) 112 (1) 301-5.
Journal code: ECW; 8701744. ISSN: 0950-1991.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199202
ENTRY DATE: Entered STN: 19920315
Last Updated on STN: 19920315
Entered Medline: 19920225

AB The cephalic **neural** crest (NC) of vertebrate embryos yields a variety of **cell** types belonging to the neuronal, glial, melanocytic and mesectodermal lineages. Using clonal cultures of quail migrating cephalic NC **cells**, we demonstrated that neurons and glial **cells** of the **peripheral** nervous system can originate from the same progenitors as cartilage, one of the mesectodermal derivatives of the NC. Moreover, we obtained evidence that the migrating cephalic NC contains a few highly **multipotent** precursors that are common to neurons, glia, cartilage and pigment **cells** and which we interprete as representative of a **stem cell** population. In contrast, other NC **cells**, although provided with identical culture conditions, give rise to clones composed of only one or some of these **cell** types. These **cells** thus appear restricted in their developmental potentialities compared to **multipotent cells**. It is therefore proposed that, in vivo, the active proliferation of pluripotent NC **cells** during the migration process generates distinct subpopulations of **cells** that become progressively committed to different developmental fates.

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L3 0 TONGUE (P) EXPLANT (P) STEM (P) CELL

=> s tongue (p) explant

L4 93 TONGUE (P) EXPLANT

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L5          207 OLFACT? (P) EPITHEL? (P) STEM (P) CELL

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L6          164 OLFACT? (P) EPITHEL? (P) STEM (P) CELL (P) NEURON?

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L7          137 OLFACT? (S) EPITHEL? (S) STEM (S) CELL (S) NEURON?

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L8            3 OLFACT? (S) EPITHEL? (S) STEM (S) CELL (S) NEURON? (S)
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PROCES NG COMPLETED FOR L8
L9            2 DUP REM L8 (1 DUPLICATE REMOVED)

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L9   A WER 1 OF 2  BIOSIS  COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESS N NUMBER:   2001:261476  BIOSIS
DOCUME  NUMBER:    PREV200100261476
TITLE:             Adult human olfactory-derived stem cells: The effect of
                   substrata on proliferation and lineage restriction.
AUTHOR ):          Patton, Chad (1); Hatcher, Linda M. (1); Lu, C. L. (1);
                   Klueber, Kathleen M. (1); Roisen, Fred J. (1)
CORPOR E SOURCE:   (1) University of Louisville, 500 S. Preston St.,
                   Louisville, KY, 40292 USA
SOURCE             FASEB Journal, (March 8, 2001) Vol. 15, No. 5, pp. A1073.
                   print.
                   Meeting Info.: Annual Meeting of the Federation of
Americ
                   Societies for Experimental Biology on Experimental Biology
                   2001 Orlando, Florida, USA March 31-April 04, 2001
                   ISSN: 0892-6638.
DOCUME  TYPE:      Conference
LANGUA :           English
SUMMAR  ANGUAGE:   English
AB   P ious studies (Roisen et al, Brain Research in press) have reported
     t  neurosphere-producing cells can be obtained from 6 to 12h
     p  t-mortem adult human olfactory epithelium. These
     m  tipotent cells give rise to neuronal,
     g  al, and epithelial populations as demonstrated by
     i  nolocalization of lincage-specific markers. The initial cultures have
     b  n through more than 100 passages; representative passages. . .
     p  liferation, morphological phenotype, and differentiation. Preliminary
     d  a suggests that laminin and an entactin-collagen-laminin combination
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i rease the number of processes per **cell** and reduce the number
o round pha[redacted]bright **cells** within 48h compar[redacted]to **cells**
m ntained on fibronectin or pre-washed glass. Immunolocalization reveals
c ls positive for beta-tubulin III, a **neuron**-specific
m ker. A smaller population of **cells** was positive for keratin
a may reflect an **epithelial** phenotype. A very limited number
o cells were found positive for both beta-tubulin III and
k atin, suggesting a common precursor. Comparison studies between
c ls from passage number 87 and early passage number 12
d onstrate similar responses on all substrata. An assay of mitochondrial
d ydrogenase activity further demonstrates the equivalency of
c ls from these passages. The ornithine decarboxylase activity of
e ly and late passages has also been assayed to provide an index of
m abolic activity. The effects of substrata on cytoskeletal development
a protein synthesis of **olfactory**-derived **stem**
c ls are being evaluated with electron microscopy and western
h analysis. Future studies will determine the possible utility of
these
c ls for transplantation.

L9 A ER 2 OF 2 MEDLINE DUPLICATE 1
ACCESS N NUMBER: 94356698 MEDLINE
DOCUM NUMBER: 94356698 PubMed ID: 8076206
TITLE: The ontogeny of the neural crest.
AUTHOR: Dupin E; Sextier-Sainte-Claire Deville F; Nataf V; Le Douarin N M
CORPOR SOURCE: Institut d'Embryologie Cellulaire et Moleculaire du C.N.R.S., College de France, Nogent-sur-Marne, France.
SOURCE: COMPTES RENDUS DE L ACADEMIE DES SCIENCES. SERIE III, SCIENCES DE LA VIE, (1993 Sep) 316 (9) 1062-81. Journal code: CA1; 8503078. ISSN: 0764-4469.
PUB. C TRY: France
Journal; Article; (JOURNAL ARTICLE)
LANGUA : English; French
FILE S MENT: Priority Journals
ENTRY NTH: 199410
ENTRY E: Entered STN: 19941013
Last Updated on STN: 19941013
Entered Medline: 19941006

AB . . . by the anterior and lateral ridges of the neural anlage, which
f e mediodorsally when the neural tube closes. Anteriorly, the
e helium of the neural fold does not convert into mesenchymal
c s and yields Rathke's pouch, the **olfactory** organ and
t **epithelium** of the mouth roof, of the upper lip and of the
f ntal region of the head. From the level of the diencephalon (at the
l of the epiphysis) downwards the neural fold **epithelium**
u ergoes the **epitheliomesenchymal** transition and yields the
r al crest **cells** which become later on highly diversified and
f various structures and tissues throughout the body. A large amount
of
c have shown that the environmental cues exerted on crest **cells**
b during their migration and when they have reached their target sites
a critical in determining their fate. In order to understand the
r anisms through which environmental factors influence crest
c differentiation, the developmental capacities of single
n al crest **cells** were investigated at different time points of
t ir ontogeny. Single **cell** cultures of crest **cells**
h e revealed that already at the migratory stage the neural crest is
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c halic migratory crest **cells** has shown that, although many
c nogenic **cells** are **multipotent** to varying degrees,
c ers are committed to give rise to one single derivative. Totipotent
p enitors able to generate representatives of virtually all the
p otypes (**neuronal**, glial, melanocytic and mesectodermal)

e ountered in cephalic neural crest derivatives were also found. We
p posed tha[redacted]ney represent stem cells analo[redacted]s to
t se which in the hemopoietic system generate the various types of blood
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t diverse progenitors that become progressively restricted in their
p entialities according to an essentially stochastic mechanism while
c iding during and after completion of the migration process. Similar
c ning experiments of crest cells that have already reached
t ir target organs, i. e. sensory ganglia or enteric plexuses, showed
t t the phenotypic repertoire expressed by crest-derived cells
d reases with increasing embryonic age. Efforts are made to elucidate
the
n ure of the factors which influence either the survival and/or the
c ferentiation of neural crest cells in the various types of
e ironments in which they evolve. (ABSTRACT TRUNCATED AT 400 WORDS)

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(LE 'HOME' ENTERED AT 10:00:34 ON 30 APR 2002)

F E 'MEDLINE, BIOSIS, EMBASE, CAPLUS' ENTERED AT 10:00:52 ON 30 APR 2002
L1 60 S MULTIPOTENT (P) STEM (P) CELL (P) PERIPHERAL (P) NEURAL
L2 26 DUP REM L1 (34 DUPLICATES REMOVED)
L3 0 S TONGUE (P) EXPLANT (P) STEM (P) CELL
L4 93 S TONGUE (P) EXPLANT
L5 207 S OLFACT? (P) EPITHEL? (P) STEM (P) CELL
L6 164 S OLFACT? (P) EPITHEL? (P) STEM (P) CELL (P) NEURON?
L7 137 S OLFACT? (S) EPITHEL? (S) STEM (S) CELL (S) NEURON?
L8 3 S OLFACT? (S) EPITHEL? (S) STEM (S) CELL (S) NEURON? (S)
MULTIP
L9 2 DUP REM L8 (1 DUPLICATE REMOVED)

=> du em l7

PROCES NG COMPLETED FOR L7
L10 64 DUP REM L7 (73 DUPLICATES REMOVED)

=> d l ibib kwic

L10 A WER 1 OF 64 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESS N NUMBER: 2002071866 EMBASE
TITLE: [Nervous primary cells in the adult: Recent progress and contribution from the olfactory system].
LES CELLULES-SOUCHES NERVEUSES CHEZ L'ADULTE: PROGRES RECENTS ET APPORTS DU SYSTEME OLFACTIF.
AUTHOR Bauer S.; Patterson P.H.; Moyse E.
CORPOR E SOURCE: S. Bauer, Neurosciences et Systemes Sensoriels, CNRS-UMR 5020; 43, Bld du 11 Novembre 1918, 69622 Villeurbanne Cedex, France
SOURCE Revue de Geriatrie, (2002) 27/1 (33-44).
Refs: 61
ISSN: 0397-7927 CODEN: RGERDX
COUNTR France
DOCUME TYPE: Journal; General Review
FILE S MENT: 008 Neurology and Neurosurgery
011 Otorhinolaryngology
020 Gerontology and Geriatrics
029 Clinical Biochemistry
LANGUA : French
SUMMAR LANGUAGE: English; French
AB N ral stem cells that have been demonstrated, since
1 2, ensure in vivo localized and adjustable neurogenesis in the brain
of

a lt mammals. This. . . demands preliminary answers to several
b logical i es. The most important one con ns the mechanisms
c trolling proliferation rate and commitment to **neuronal**
l eage of neural **stem cells**. **Olfactory**
s tem of adult rodents provide an excellent model-system to address this
b ic question. This sensory pathway harbors indeed the two neurogenetic
s tems that are the most active in adult mammals: **epithelium** of
o **actory** organ (OE) from intrinsic **neuronal**
p enitors, **olfactory** bulb from neural **stem**
c l of telencephalic ventricles. We used OE to analyze
p liferation control by intrinsic mitogenic signals. Among all factors
a ing upon **cell** cultures, only the cytokine LIF (Leukemia
I ibitory Factor) was significantly induced in vivo preceding
l ion-induced stimulation of progenitors, in the. . .

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2	12	stem same cells same multipotent same neural same epithelial	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/04/30 09:50
3	148	stem same cells same neural same epithelial	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/04/30 09:58
5	15	mammalian same multipotent same neural same stem same cell same crest	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/04/30 09:56
4	45	mammalian same multipotent same neural same stem same cell	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/04/30 09:56
6	3	5411883.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/04/30 09:59
7	3	5753506.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/04/30 09:59